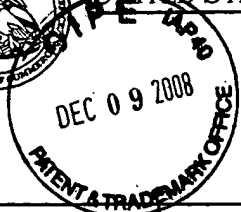




# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/764,417

01/23/2004

Jannis G. Stavrianopoulos

Enz-61(D12)

8192

28171 7590 06/18/2008  
ENZO BIOCHEM, INC.  
527 MADISON AVENUE (9TH FLOOR)  
NEW YORK, NY 10022

EXAMINER

RILEY, JEZIA

ART UNIT

PAPER NUMBER

1637

MAIL DATE

DELIVERY MODE

06/18/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## Office Action Summary

Application No.

10/764,417

Applicant(s)

STAVRIANOPOULOS ET AL.

Examiner

Jezia Riley

Art Unit

1637

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2008.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 287-304 and 307-321 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 307-321 is/are allowed.
- 6) ☒ Claim(s) 287-300 is/are rejected.
- 7) ☒ Claim(s) 301-304 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

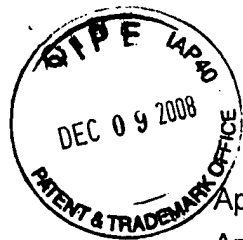
### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_



Application/Control Number: 10/764,417

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## DETAILED ACTION

### *Response to Remarks*

Applicants' arguments, filed on 3/10/2008, have been approved and entered. They have been fully considered. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either newly applied or reiterated. They constitute the complete set presently being applied to the instant application.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 287-300 are rejected under 35 U.S.C. 102(b) as being anticipated by Naito (US 5,707,779).

Naito discloses a composition comprising a dye covalently linked to a moiety having a reactive group. The composition comprises a dye molecule, wherein the dye molecule has a molecular structure containing an aromatic skeleton and three or more dye skeletons which respectively bond to the aromatic skeleton via a chemical bond formed by a condensation reaction. The dye molecule has a molecular structure containing a heterocyclic aromatic skeleton and three or more dye skeletons which bind to the heterocyclic aromatic skeleton so as to form a  $\pi$  electron conjugated system (col.

Art Unit: 1637

2, col.4-17, col. 19-20), which is viewed to be inclusive of the additional reactive group Rx. Col. 30 shows a structure of formula (9) where the composition comprises a moiety comprising a reactive group CF<sub>3</sub>. see also col. 35-36, which shows fused aromatic ring. Col. 48 shows composition comprising charged or polar moiety, which will inherently increase solubility, which is viewed to be inclusive of instant claim 297.

Claims 301-304 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 307-321 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jezia Riley whose telephone number is 571-272-0786. The examiner can normally be reached on 9:30AM - 5:00PM.

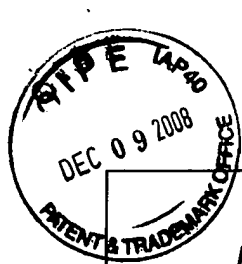
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1637

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6/16/2008

/Jezia Riley/  
Primary Examiner, Art Unit 1637



# **Notice of References Cited**

Application/Control No.

10/764,417

Applicant(s)/Patent Under  
Reexamination  
STAVRIANOPOULOS ET AL.

Examiner

Jezia Riley

Art Unit

1637

Page 1 of 1

## **U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,707,779	01-1998	Naito, Katsuyuki	430/270.1
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

## **FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

## **NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



\*\*\*\*\* STN Columbus \*\*\*\*\*

FILE 'HOME' ENTERED AT 14:36:45 ON 16 JUN 2008

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=> s (dye or fluorescen? or label?) (4a) (unsatur? or aromatic or heterocycl?)  
L1 11088 (DYE OR FLUORESCEN? OR LABEL?) (4A) (UNSATUR? OR AROMATIC OR  
HETEROCYCL?)

=> s l1 and (conjugated or delocali?) (system? or structur?)  
MISSING OPERATOR ELOCALI?) (SYSTEM?  
The search profile that was entered contains terms or  
nested terms that are not separated by a logical operator.

=> s l1 and (conjugated or delocali?) (4a) (system? or structur?)  
L2 274 L1 AND (CONJUGATED OR DELOCALI?) (4A) (SYSTEM? OR STRUCTUR?)

=> s l2 and dye (3a) (conjugated or delocali?) (4a) (system? or structur?)  
L3 32 L2 AND DYE (3A) (CONJUGATED OR DELOCALI?) (4A) (SYSTEM? OR STRUC  
TUR?)

=> dup rem l3  
PROCESSING COMPLETED FOR L3  
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=> d l4 bib abs 1-32

L4 ANSWER 1 OF 32 USPATFULL on STN  
AN 2007:72470 USPATFULL  
TI Electrophoresis standards, methods and kits  
IN Gentalen, Erik, Mountain View, CA, UNITED STATES  
Suich, Daniel J., Oakland, CA, UNITED STATES  
PI US 20070062813 A1 20070322  
AI US 2006-524630 A1 20060920 (11)  
PRAI US 2005-719246P 20050920 (60)  
DT Utility  
FS APPLICATION  
LREP DORSEY & WHITNEY LLP, 555 CALIFORNIA STREET, SUITE 1000, SUITE 1000, SAN  
FRANCISCO, CA, 94104, US

CLMN Number of Claims: 29  
ECL Exemplary Claim: 1  
DRWN 5 Drawing Page(s)  
LN.CNT 1164

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Electrophoresis Compositions, methods and kits useful for, among other things, detecting, quantifying and/or characterizing analytes are provided. The compositions are useful as electrophoresis standards for determine the isoelectric point and molecular weight of an analyte. The electrophoresis standards generally comprise at least one label moiety and one or more reactive moieties that when activated attach the standard to a substrate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 2 OF 32 USPATFULL on STN  
AN 2006:202424 USPATFULL  
TI Labeling reagents and labeled targets comprising nonmetallic porphyrins  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc., New York, NY, UNITED STATES (U.S. corporation)  
PI US 20060172308 A1 20060803  
AI US 2004-763088 A1 20040122 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022, US  
CLMN Number of Claims: 19  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)  
LN.CNT 3541

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 32 USPATFULL on STN  
AN 2006:40616 USPATFULL  
TI Processes for incorporating nucleic acid sequences into an analyte or library of analytes  
IN Rabbani, Elazar, New York, NY, UNITED STATES  
Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Donegan, James J., Long Beach, NY, UNITED STATES  
Coleman, Jack, East Northport, NY, UNITED STATES  
Liu, Dakai, Islip, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES (U.S. corporation)  
PI US 20060035264 A1 20060216  
AI US 2005-237466 A1 20050927 (11)  
RLI Division of Ser. No. US 2002-96076, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022, US



CLMN Number of Claims: 69  
ECL Exemplary Claim: 1-413  
DRWN 15 Drawing Page(s)  
LN.CNT 4099

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for compositions for use in real time nucleic acid detection processes. Such real time nucleic acid detection processes are carried out with energy transfer elements attached to nucleic acid primers, nucleotides, nucleic acid probes or nucleic acid binding agents. Real time nucleic acid detection allows for the qualitative or quantitative detection or determination of single-stranded or double-stranded nucleic acids of interest in a sample. Other processes are provided by this invention including processes for removing a portion of a homopolymeric sequence, e.g., poly A sequence or tail, from an analyte or library of analytes. Compositions useful in carrying out such removal processes are also described and provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 4 OF 32 USPATFULL on STN  
AN 2006:34199 USPATFULL  
TI Processes for quantitative or qualitative detection of single-stranded or double-stranded nucleic acids  
IN Rabbani, Elazar, New York, NY, UNITED STATES  
Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Donegan, James J., Long Beach, NY, UNITED STATES  
Coleman, Jack, East Northport, NY, UNITED STATES  
Liu, Dakai, Islip, NY, UNITED STATES  
PI US 20060029968 A1 20060209  
AI US 2005-235516 A1 20050926 (11)  
RLI Division of Ser. No. US 2002-96076, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022, US  
CLMN Number of Claims: 275  
ECL Exemplary Claim: 1-33  
DRWN 15 Drawing Page(s)  
LN.CNT 5182

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for compositions for use in real time nucleic acid detection processes. Such real time nucleic acid detection processes are carried out with energy transfer elements attached to nucleic acid primers, nucleotides, nucleic acid probes or nucleic acid binding agents. Real time nucleic acid detection allows for the qualitative or quantitative detection or determination of single-stranded or double-stranded nucleic acids of interest in a sample. Other processes are provided by this invention including processes for removing a portion of a homopolymeric sequence, e.g., poly A sequence or tail, from an analyte or library of analytes. Compositions useful in carrying out such removal processes are also described and provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 32 USPATFULL on STN  
AN 2006:27907 USPATFULL  
TI Site- or sequence-specific process for cleaving analytes and library of analytes  
IN Rabbani, Elazar, New York, NY, UNITED STATES

Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Donegan, James J., Long Beach, NY, UNITED STATES

Coleman, Jack, East Northport, NY, UNITED STATES

Liu, Dakai, Islip, NY, UNITED STATES

PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES (U.S. corporation)

PI US 20060024738 A1 20060202

AI US 2005-237467 A1 20050927 (11)

RLI Division of Ser. No. US 2002-96076, filed on 12 Mar 2002, PENDING

DT Utility

FS APPLICATION

LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022,  
US

CLMN Number of Claims: 555

ECL Exemplary Claim: 1

DRWN 15 Drawing Page(s)

LN.CNT 6144

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for compositions for use in real time nucleic acid detection processes. Such real time nucleic acid detection processes are carried out with energy transfer elements attached to nucleic acid primers, nucleotides, nucleic acid probes or nucleic acid binding agents. Real time nucleic acid detection allows for the qualitative or quantitative detection or determination of single-stranded or double-stranded nucleic acids of interest in a sample. Other processes are provided by this invention including processes for removing a portion of a homopolymeric sequence, e.g., poly A sequence or tail, from an analyte or library of analytes. Compositions useful in carrying out such removal processes are also described and provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 32 USPATFULL on STN

AN 2006:27906 USPATFULL

TI Process for removal of homopolymeric sequence portion from analyte(s)  
and library of analytes

IN Babbani, Elazar, New York, NY, UNITED STATES

Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Donegan, James J., Long Beach, NY, UNITED STATES

Coleman, Jack, East Northport, NY, UNITED STATES

Liu, Dakai, Islip, NY, UNITED STATES

PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES (U.S. corporation)

PI US 20060024737 A1 20060202

AI US 2005-237442 A1 20050927 (11)

RLI Division of Ser. No. US 2002-96076, filed on 12 Mar 2002, PENDING

DT Utility

FS APPLICATION

LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022,  
US

CLMN Number of Claims: 17

ECL Exemplary Claim: 1-527

DRWN 15 Drawing Page(s)

LN.CNT 3943

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for compositions for use in real time nucleic acid detection processes. Such real time nucleic acid detection processes are carried out with energy transfer elements attached to nucleic acid primers, nucleotides, nucleic acid probes or nucleic acid binding agents. Real time nucleic acid detection allows for the qualitative or quantitative detection or determination of single-stranded or double-stranded nucleic acids of interest in a

sample. Other processes are provided by this invention including processes for removing a portion of a homopolymeric sequence, e.g., poly A sequence or tail, from an analyte or library of analytes. Compositions useful in carrying out such removal processes are also described and provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 32 USPATFULL on STN  
AN 2006:27904 USPATFULL  
TI Chimeric nucleic acid constructs and compositions comprising sets of nucleic acid constructs  
IN Rabbani, Elazar, New York, NY, UNITED STATES  
Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Donegan, James J., Long Beach, NY, UNITED STATES  
Coleman, Jack, East Northport, NY, UNITED STATES  
Liu, Dakai, Islip, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES (U.S. corporation)  
PI US 20060024735 A1 20060202  
AI US 2005-236151 A1 20050927 (11)  
RLI Division of Ser. No. US 2002-96076, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022, US  
CLMN Number of Claims: 52  
ECL Exemplary Claim: 1-404  
DRWN 15 Drawing Page(s)  
LN.CNT 4013

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for compositions for use in real time nucleic acid detection processes. Such real time nucleic acid detection processes are carried out with energy transfer elements attached to nucleic acid primers, nucleotides, nucleic acid probes or nucleic acid binding agents. Real time nucleic acid detection allows for the qualitative or quantitative detection or determination of single-stranded or double-stranded nucleic acids of interest in a sample. Other processes are provided by this invention including processes for removing a portion of a homopolymeric sequence, e.g., poly A sequence or tail, from an analyte or library of analytes. Compositions useful in carrying out such removal processes are also described and provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 32 USPATFULL on STN  
AN 2005:286855 USPATFULL  
TI Fluorescent nucleobase conjugates having anionic linkers  
IN Taing, Meng, San Mateo, CA, UNITED STATES  
Khan, Shaheer H., Foster City, CA, UNITED STATES  
Menchen, Steven M., Fremont, CA, UNITED STATES  
Rosenblum, Barnett B., San Jose, CA, UNITED STATES  
PA Applera Corporation, Foster City, CA, UNITED STATES (U.S. corporation)  
PI US 20050250119 A1 20051110  
AI US 2004-977341 A1 20041028 (10)  
RLI Continuation of Ser. No. US 2001-976168, filed on 11 Oct 2001, GRANTED, Pat. No. US 6811979  
PRAI US 2000-239660P 20001011 (60)  
DT Utility  
FS APPLICATION  
LREP MILA KASAN, PATENT DEPT., APPLIED BIOSYSTEMS, 850 LINCOLN CENTRE DRIVE,

FOSTER CITY, CA, 94404, US

CLMN Number of Claims: 2

ECL Exemplary Claim: 1

DRWN 76 Drawing Page(s)

LN.CNT 2438

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided are nucleotide-dye conjugates and related compounds in which a dye is linked to a nucleobase directly or indirectly by an anionic linker. The anionic character of the linker is provided by one or more anionic moieties which are present in the linker, such as phosphate, phosphonate, sulfonate, and carboxylate groups. When the dye is a provided as a donor/acceptor dye pair, the anionic linker can be located between the donor and the acceptor, or between the nucleobase and either the donor or acceptor, or both. In one embodiment, conjugates of the invention provide enhanced electrophoretic mobility characteristics to sequencing fragments, e.g., for dideoxy sequencing using labeled terminators.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 32 USPATFULL on STN

AN - 2005:159178 USPATFULL

TI Real-time nucleic acid detection processes and compositions

IN Rabbani, Elazar, New York, NY, UNITED STATES

Stavrianopoulos, Jannis G., Baysnore, NY, UNITED STATES

Donegan, James J., Long Beach, NY, UNITED STATES

Coleman, Jack, East Northport, NY, UNITED STATES

Liu, Dakai, Islip, NY, UNITED STATES

PI US 20050137388 A1 20050623

AI US 2002-96076 A1 20020312 (10)

DT Utility

FS APPLICATION

LREP ENZO BIOCHEM, INC., 527 MADISON AVENUE (9TH FLOOR), NEW YORK, NY, 10022, US

CLMN Number of Claims: 542

ECL Exemplary Claim: 1

DRWN 15 Drawing Page(s)

LN.CNT 6158

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for compositions for use in real time nucleic acid detection processes. Such real time nucleic acid detection processes are carried out with energy transfer elements attached to nucleic acid primers, nucleotides, nucleic acid probes or nucleic acid binding agents. Real time nucleic acid detection allows for the qualitative or quantitative detection or determination of single-stranded or double-stranded nucleic acids of interest in a sample. Other processes are provided by this invention including processes for removing a portion of a homopolymeric sequence, e.g., poly A sequence or tail, from an analyte or library of analytes. Compositions useful in carrying out such removal processes are also described and provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 32 USPATFULL on STN

AN 2005:5243 USPATFULL

TI Novel chemiluminescent reagents

IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Rabbani, Elazar, New York, NY, UNITED STATES

PA Enzo Life Sciences, Inc., New York, NY, 10022 (U.S. corporation)

PI US 20050004350 A1 20050106

US 7256299 B2 20070814  
AI US 2004-764388 A1 20040123 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 17  
ECL Exemplary Claim: CLM-1-286  
DRWN 15 Drawing Page(s)  
LN.CNT 3601

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 32 USPATFULL on STN  
AN 2004:321700 USPATFULL  
TI Labeling reagents comprising aphenylic analogs of rhodamine dyes  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY (U.S. corporation)  
PI US 20040254355 A1 20041216  
US 7256291 B2 20070814  
AI US 2004-763076 A1 20040122 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 286  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)  
LN.CNT 4545

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 32 USPATFULL on STN  
AN 2004:292946 USPATFULL  
TI Heterodimeric dye composition  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES, 10022 (U.S. corporation)  
PI US 20040230036 A1 20041118  
US 7323571 B2 20080129  
AI US 2004-764389 A1 20040123 (10)

RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 286  
ECL Exemplary Claim: 1  
DRWN 15 Drawing Page(s)  
LN.CNT 4541

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 32 USPATFULL on STN  
AN 2004:292164 USPATFULL  
TI Novel dye labeling composition  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, 10022 (U.S. corporation)  
PI US 20040229248 A1 20041118  
US 6949659 B2 20050927  
AI US 2004-764393 A1 20040123 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue, 9th Floor, New York, NY, 10022-4304  
CLMN Number of Claims: 4  
ECL Exemplary Claim: CLM-1-286  
DRWN 15 Drawing Page(s)  
LN.CNT 3537

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 32 USPATFULL on STN  
AN 2004:260541 USPATFULL  
TI Process for preparing novel cyanine dye labeling reagents  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbam, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, 10022 (U.S. corporation)  
PI US 20040203038 A1 20041014  
US 7241897 B2 20070710  
AI US 2004-761906 A1 20040121 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION

LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 15  
ECL Exemplary Claim: CLM-1-286  
DRWN 15 Drawing Page(s)  
LN.CNT 3584

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and  
processes for preparing labeling reagents. The labeling reagents can  
take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin  
dyes or composite dyes. These labeling reagents are useful for labeling  
probes or targets, including nucleic acids and proteins. These reagents  
can be usefully applied to protein and nucleic acid probe based assays.  
They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 15 OF 32 USPATFULL on STN  
AN 2004:248291 USPATFULL  
TI Process for detecting the presence or quantity of enzymatic activity in  
a sample  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES, 10022 (U.S.  
corporation)  
PI US 20040192893 A1 20040930  
AI US 2004-764417 A1 20040123 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,  
527 Madison Avenue (9th Floor), New York, NY, 10022-4304  
CLMN Number of Claims: 36  
ECL Exemplary Claim: CLM-1-286  
DRWN 15 Drawing Page(s)  
LN.CNT 3665

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and  
processes for preparing labeling reagents. The labeling reagents can  
take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin  
dyes or composite dyes. These labeling reagents are useful for labeling  
probes or targets, including nucleic acids and proteins. These reagents  
can be usefully applied to protein and nucleic acid probe based assays.  
They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 32 USPATFULL on STN  
AN 2004:228200 USPATFULL  
TI Process for detecting the presence or quantity of enzymatic activity in  
a sample  
IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES  
Rabbani, Elazar, New York, NY, UNITED STATES  
PA Enzo Life Sciences, Inc., New York, NY, UNITED STATES (U.S. corporation)  
PI US 20040176586 A1 20040909  
US 7163796 B2 20070116  
AI US 2004-764418 A1 20040123 (10)  
RLI Division of Ser. No. US 2002-96075, filed on 12 Mar 2002, PENDING  
DT Utility  
FS APPLICATION  
LREP Ronald C. Fedus, Esq., Enzo Life Sciences, Inc., c/o Enzo Biochem, Inc.,

527 Madison Avenue (9th Floor), New York, NY, 10022-4304

CLMN Number of Claims: 286

ECL Exemplary Claim: 1

DRWN 15 Drawing Page(s)

LN.CNT 4543

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and processes for preparing labeling reagents. The labeling reagents can take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin dyes or composite dyes. These labeling reagents are useful for labeling probes or targets, including nucleic acids and proteins. These reagents can be usefully applied to protein and nucleic acid probe based assays. They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 32 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 2004:271760 BIOSIS

DN PREV200400272800

TI Staining by numbers: A tool for understanding and assisting use of routine and special histopathology stains.

AU Horobin, Richard W. [Reprint Author]

CS IBLSDiv Neurosci & Biomed Syst, Univ Glasgow, Western Med Bldg, Glasgow, Lanark, G12 8QQ, Scotland  
RichardWHorobin@aol.com

SO Journal of Histotechnology, (March 2004) Vol. 27, No. 1, pp. 23-28. print.  
CODEN: JOHIDN. ISSN: 0147-8885.

DT Article

LA English

ED Entered STN: 2 Jun 2004

Last Updated on STN: 2 Jun 2004

AB Most benchworkers consider successful histopathological staining as a matter of skills, experience, and rules of thumb. This article champions a further factor: making useful predictions concerning stains and staining using QSAR (quantitative structure-activity relations) models, for instance, when selecting new stains, or modifying old stains, or trouble-shooting problem stains. QSAR models require a description of properties of stain molecules by numbers, with these numbers being used to make predictions and to understand what's happening. Key numerical parameters ("numbers") describe electric charge, overall size of a dye or dye ion, hydrophilicity/lipophilicity, and size of a dye's aromatic system. Simple case examples discussed are the nature of acid and basic dyes; the effects of staining rates on demonstration of mucins with basic dyes; the control of lipid staining by dye lipophilicity; and influence of the size of a dye's conjugated system on high-affinity staining. More complicated applications of QSAR models are also discussed, namely the selection of alternative stains to alcians blue and yellow; avoidance of stain loss during washing, cleaning, and mounting; and identification of positive artifacts, specifically background staining occurring with resin embedded specimens. Do-it-yourself staining by numbers also is discussed.

L4 ANSWER 18 OF 32 USPATFULL on STN

AN 2003:319498 USPATFULL

TI Labeling reagents and labeled targets, target labeling processes and other processes for using same in nucleic acid determinations and analyses

IN Stavrianopoulos, Jannis G., Bayshore, NY, UNITED STATES

Rabbani, Elazar, New York, NY, UNITED STATES

PI US 20030225247 A1 20031204



AI US 7166478 B2 20070123  
 DT US 2002-96075 A1 20020312 (10)  
 FS Utility  
 FS APPLICATION  
 LREP ENZO LIFE SCIENCES, INC., c/o ENZO BIOCHEM, INC., 527 Madison Avenue,  
 9th Floor, New York, NY, 10022  
 CLMN Number of Claims: 286  
 ECL Exemplary Claim: 1  
 DRWN 15 Drawing Page(s)  
 LN.CNT 4499

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides for labeling reagents, labeled targets and  
 processes for preparing labeling reagents. The labeling reagents can  
 take the form of cyanine dyes, xanthene dyes, porphyrin dyes, coumarin  
 dyes or composite dyes. These labeling reagents are useful for labeling  
 probes or targets, including nucleic acids and proteins. These reagents  
 can be usefully applied to protein and nucleic acid probe based assays.  
 They are also applicable to real-time detection processes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 19 OF 32 WPIDS COPYRIGHT 2008 THOMSON REUTERS on STN  
 AN 2003-140216 [13] WPIDS  
 DNC C2003-035471 [13]  
 TI New DNA groove-binding cyanine dye for use in probe for nucleic acid  
 hybridization  
 DC B04; D16; E23  
 IN KARLSSON J; WESTMAN G; KUBISTA M  
 PA (LIGH-N) LIGHT UP TECHNOLOGIES AB; (LIGH-N) LIGHTUP TECHNOLOGIES AB  
 CYC 99  
 PIA WO 2002090443 A1 20021114 (200313)\* EN 55[19]  
 SE 2001001651 A 20021111 (200313) SV  
 SE 519116 C2 20030114 (200313) SV  
 EP 1390433 A1 20040225 (200415) EN  
 US 20040132046 A1 20040708 (200445) EN  
 AU 2002303054 A1 20021118 (200452) EN  
 JP 2004536900 W 20041209 (200481) JA 89  
 EP 1390433 B1 20050216 (200513) EN  
 DE 60203005 E 20050324 (200523) DE  
 DE 60203005 T2 20060511 (200635) DE  
 AU 2002303054 B2 20061207 (200729) EN  
 US 7378240 B2 20080527 (200835) EN  
 ADT WO 2002090443 A1 WO 2002-SE860 20020510; SE 519116 C2 SE 2001-1651  
 20010510; SE 2001001651 A SE 2001-1651 20010510; AU 2002303054 A1 AU  
 2002-303054 20020510; AU 2002303054 B2 AU 2002-303054 20020510; DE  
 60203005 E DE 2002-60203005 20020510; DE 60203005 T2 DE 2002-60203005  
 20020510; EP 1390433 A1 EP 2002-731046 20020510; EP 1390433 B1 EP  
 2002-731046 20020510; DE 60203005 E EP 2002-731046 20020510; DE 60203005  
 T2 EP 2002-731046 20020510; JP 2004536900 W JP 2002-587511 20020510; EP  
 1390433 A1 WO 2002-SE860 20020510; US 20040132046 A1 Cont of WO 2002-SE860  
 20020510; JP 2004536900 W WO 2002-SE860 20020510; EP 1390433 B1 WO  
 2002-SE860 20020510; DE 60203005 E WO 2002-SE860 20020510; DE 60203005 T2  
 WO 2002-SE860 20020510; US 20040132046 A1 US 2003-605961 20031110; US  
 7378240 B2 Cont of WO 2002-SE860 20020510; US 7378240 B2 US 2003-605961  
 20031110  
 FDT DE 60203005 E Based on EP 1390433 A; DE 60203005 T2 Based on  
 EP 1390433 A; EP 1390433 A1 Based on WO 2002090443 A; AU  
 2002303054 A1 Based on WO 2002090443 A; JP 2004536900 W Based on WO  
 2002090443 A; EP 1390433 B1 Based on WO 2002090443 A; DE 60203005  
 E Based on WO 2002090443 A; DE 60203005 T2 Based on WO 2002090443  
 A; AU 2002303054 B2 Based on WO 2002090443 A

PRAI SE 2001-1651 20010510

AN 2003-140216 [13] WPIDS

AB WO 2002090443 A1 UPAB: 20050903

NOVELTY - A cyanine dye binding in the groove of DNA, is new.

DETAILED DESCRIPTION - A cyanine dye binding in the groove of DNA of formula (I) or (II) is new.

A1, A2 = O, S or N;

R = H or carbohydrate that may contain a heteroatom;

m, n = 0-5.

An INDEPENDENT CLAIM is included for carrying out real-time PCR reaction of a DNA template.

USE - The dye is for use in a probe for nucleic acid hybridization. It is useful for carrying out a real-time PCR-reaction of a DNA template. (All claimed).

ADVANTAGE - The dye of the invention binds differently to A-T rich and G-C rich regions. It binds to the minor groove of A-T rich regions and it stabilizes A-T bonds more than G-C bonds in a DNA duplex. The dye in probes improves mismatch discrimination.

L4 ANSWER 20 OF 32 USPATFULL on STN

AN 2002:75102 USPATFULL

TI Optical storage medium

IN Yamazaki, Mikio, Kanagawa, JAPAN

Kanno, Toshiyuki, Nagano, JAPAN

PA Fuji Electric Co., Ltd., JAPAN (non-U.S. corporation)

PI US 6368692 B1 20020409

AI US 1999-411447 19991001 (9)

PRAI JP 1998-286263 19981008

DT Utility

FS GRANTED

EXNAM Primary Examiner: Evans, Elizabeth

LREP Morrison Law Firm

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN 19 Drawing Figure(s); 14 Drawing Page(s)

LN.CNT 844

AB An optical storage medium that is compatible with a semiconductor laser having a beam with a short wavelength (i.e. between 500 and 700 nm), which includes a highly stable dye layer. The optical storage medium of the invention includes an optically transparent substrate having at least one major surface on which at least one groove is formed, a storage layer on the substrate and a metal reflection layer on the storage layer. The storage layer contains a composite consisting of from about 3 weight % to about 30 weight % of a metal complex compound and a cyanine dye. The cyanine dye absorbs light in the wavelength between 500 and 700 nm, and has an asymmetric molecular structure. The optical storage medium of the invention reduces jitter components in high density data storage and conforms to DVD specifications.

L4 ANSWER 21 OF 32 USPATFULL on STN

AN 2002:191525 USPATFULL

TI Fluorescent nucleobase conjugates having anionic linkers

IN Taing, Meng, San Mateo, CA, UNITED STATES

Khan, Shaheer H., Foster City, CA, UNITED STATES

Menchen, Steven M., Fremont, CA, UNITED STATES

Rosenblum, Barnett B., San Jose, CA, UNITED STATES

PA PE Corporation (NY), Foster City, CA, UNITED STATES, 94404 (U.S. corporation)

PI US 20020102590 A1 20020801

US 6811979 B2 20041102

AI US 2001-976168 A1 20011011 (9)  
PRAI US 2000-239660P 20001011 (60)  
DT Utility  
FS APPLICATION  
LREP PATTI SELAN, PATENT ADMINISTRATOR, APPLIED BIOSYSTEMS, 850 LINCOLN  
CENTRE DRIVE, FOSTER CITY, CA, 94404  
CLMN Number of Claims: 85  
ECL Exemplary Claim: 1  
DRWN 76 Drawing Page(s)  
LN.CNT 2702

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided are nucleotide-dye conjugates and related compounds in which a dye is linked to a nucleobase directly or indirectly by an anionic linker. The anionic character of the linker is provided by one or more anionic moieties which are present in the linker, such as phosphate, phosphonate, sulfonate, and carboxylate groups. When the dye is a provided as a donor/acceptor dye pair, the anionic linker can be located between the donor and the acceptor, or between the nucleobase and either the donor or acceptor, or both. In one embodiment, conjugates of the invention provide enhanced electrophoretic mobility characteristics to sequencing fragments, e.g., for dideoxy sequencing using labeled terminators.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 22 OF 32 USPATFULL on STN  
AN 2001:136785 USPATFULL  
TI Monomethine cyanines rigidized by a two-carbon chain  
IN Mujumdar, Ratnakar B., Glenshaw, PA, United States  
Waggoner, Alan S., Pittsburgh, PA, United States  
Karandikar, Bhalchandra M., Tigard, OR, United States  
PA Carnegie Mellon University, Pittsburgh, PA, United States (U.S. corporation)  
PI US 6277984 B1 20010821  
AI US 1999-249537 19990211 (9)  
RLI Continuation of Ser. No. US 1995-474057, filed on 7 Jun 1995, now patented, Pat. No. US 5852191  
DT Utility  
FS GRANTED  
EXNAM Primary Examiner: Kifle, Bruck  
LREP Kirkpatrick & Lockhart LLP  
CLMN Number of Claims: 28  
ECL Exemplary Claim: 1  
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)  
LN.CNT 1277

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Fluorescent monomethine cyanine complexes rigidized a two-carbon alkyl group between the nitrogen's of the cyanine's heterocycles are provided and having the structure ##STR1##

wherein R.sub.1 through R.sub.7 represent various selected groups or ring structures that may be chosen to provide desired solubility, reactive, or spectral properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 23 OF 32 USPATFULL on STN  
AN 1999:146792 USPATFULL  
TI Monomethine cyanines rigidized by a two-carbon chain  
IN Mujumdar, Ratnakar B., Glenshaw, PA, United States  
Waggoner, Alan S., Pittsburgh, PA, United States

PA Karandikar, Bhalchandra M., Tigard, OR, United States  
Carnegie Mellon University, Pittsburgh, PA, United States (U.S.  
corporation)  
PI US 5986093 19991116  
AI US 1995-474057 19950607 (8)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Shah, Mukund J.; Assistant Examiner: Kifle, Bruck  
LREP Kirkpatrick & Lockhart LLP  
CLMN Number of Claims: 8  
ECL Exemplary Claim: 1  
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)  
LN.CNT 1174  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB Fluorescent monomethine cyanine complexes rigidized by a two-carbon  
alkyl group between the nitrogen's of the cyanine's heterocycles are  
provided and have the structure ##STR1## wherein R.sub.1 through R.sub.7  
represent various selected groups or ring structures that may be chosen  
to provide desired solubility, reactive, or spectral properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 24 OF 32 USPATFULL on STN  
AN 1999:142154 USPATFULL  
TI Monomethine cyanines rigidized by a two-carbon chain  
IN Mujumdar, Ratnakar B., Glenshaw, PA, United States  
Waggoner, Alan S., Pittsburgh, PA, United States  
Karandikar, Bhalchandra M., Tigard, OR, United States  
PA Carnegie Mellon University, Pittsburgh, PA, United States (U.S.  
corporation)  
PI US 5981747 19991109  
AI US 1997-997275 19971223 (8)  
RLI Continuation of Ser. No. US 1995-474057, filed on 7 Jun 1995  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Raymond, Richard L.; Assistant Examiner: Sripada,  
Pavanaram K  
LREP Kirkpatrick & Lockhart LLP  
CLMN Number of Claims: 4  
ECL Exemplary Claim: 1  
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)  
LN.CNT 1318  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB Fluorescent monomethine cyanine complexes rigidized by a two-carbon  
alkyl group between the nitrogen's of the cyanine's heterocycles are  
provided and have the structure ##STR1## wherein R.sub.1 through R.sub.7  
represent various selected groups or ring structures that may be chosen  
to provide desired solubility, reactive, or spectral properties.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 25 OF 32 USPATFULL on STN  
AN 1998:4382 USPATFULL  
TI Amorphous organic thin-film device, amorphous organic polymer  
composition, and amorphous inorganic composition  
IN Naito, Katsuyuki, Yokohama, Japan  
PA Kabushiki Kaisha Toshiba, Kawasaki, Japan (non-U.S. corporation)  
PI US 5707779 19980113  
AI US 1996-701991 19960823 (8)  
RLI Continuation of Ser. No. US 1994-281034, filed on 27 Jul 1994, now  
abandoned

PRAI JP 1993-184652 19930727  
JP 1994-48092 19940318  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Angebrannndt, Martin  
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.  
CLMN Number of Claims: 9  
ECL Exemplary Claim: 9  
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)  
LN.CNT 1102

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An amorphous organic thin-film device comprising an organic thin-film containing a dye molecules represented by the following formula (1) or (2):

R-[X-Y].sub.n (1)

R'-[X'-Y].sub.n (2)

wherein R represents an aromatic skeleton, R' represents a heterocyclic aromatic skeleton, X represents a linkage group containing a chemical bond formed by a condensation reaction, X' represents a member selected from the group consisting of a single bond, --O--, --NH--, --NR"CO-- and --CH.sub.2 --, Y represents a dye skeleton with or without a substituent; and n is an integer of 3 or more, in which n members of X, X' and Y may be the same or different.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 26 OF 32 USPATFULL on STN  
AN 97:29383 USPATFULL  
TI Biodegradable azo dyes  
IN Paszczynski, Andrzej, Moscow, ID, United States  
Goszczynski, Stefan, Moscow, ID, United States  
Crawford, Ronald L., Moscow, ID, United States  
Crawford, Donald L., Moscow, ID, United States  
Pasti, Maria B., Moscow, ID, United States  
PA Idaho Research Foundation, Inc., Moscow, ID, United States (U.S. corporation)  
PI US 5618726 19970408  
AI US 1994-345261 19941123 (8)  
RLI Continuation of Ser. No. US 1992-970716, filed on 2 Nov 1992, now abandoned which is a continuation-in-part of Ser. No. US 1992-930162, filed on 12 Aug 1992, now abandoned which is a continuation-in-part of Ser. No. US 1991-615514, filed on 27 Mar 1991, now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Kight, John; Assistant Examiner: Leary, Louise  
LREP Klarquist Sparkman Campbell Leigh & Whinston, LLP  
CLMN Number of Claims: 27  
ECL Exemplary Claim: 1  
DRWN 22 Drawing Figure(s); 11 Drawing Page(s)  
LN.CNT 2117

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A composition comprises an azo dye having a lignin-like substitution pattern and an environmentally common microbe, such as Streptomyces or Phanerochaete chrysosporium. The composition may also comprise an azo dye having a lignin-like substitution pattern, an amount of lignin peroxidase effective to degrade the dye, and an amount of veratryl alcohol effective to recycle lignin peroxidase II to lignin peroxidase. The lignin peroxidase may be provided by an environmentally common

microbe. Azo dyes substituted with lignin-like groups are completely mineralized by the environmentally common microbe. The biodegradable azo dye preferably includes a first aromatic ring having a first substituent R1 selected from hydroxy or lower alkoxy, a second substituent R2 selected from lower alkyl or lower alkoxy, and a third substituent R3 selected from lower alkoxy or halogen. In especially preferred embodiments the first substituent R.sub.1 is hydroxy and is para to the azo group, and both R.sub.2 and R.sub.3 are electron-releasing substituents and are ortho to R.sub.1.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 27 OF 32 USPATFULL on STN  
AN 96:7405 USPATFULL  
TI Biodegradable azo dyes  
IN Paszczynski, Andrzej, Moscow, ID, United States  
Goszczynski, Stefan, Moscow, ID, United States  
Crawford, Ronald L., Moscow, ID, United States  
Crawford, Donald L., Moscow, ID, United States  
Pasti, Maria B., Moscow, ID, United States  
PA Idaho Research Foundation, Inc., Moscow, ID, United States (U.S. corporation)  
PI US 5486214 19960123  
AI US 1992-930162 19920812 (7)  
RLI Continuation-in-part of Ser. No. US 1991-675514, filed on 27 Mar 1991  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Lieberman, Paul; Assistant Examiner: Ogden, Necholus  
LREP Klarquist Sparkman Campbell Leigh & Winston  
CLMN Number of Claims: 16  
ECL Exemplary Claim: 1  
DRWN 16 Drawing Figure(s); 9 Drawing Page(s)  
LN.CNT 1194

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A biodegradable azo dye contains a nitrogen atom linked to an aromatic ring having a lignin-like substitution pattern. The ring is preferably a syringyl or guaiacol moiety, and provides a naturally-occurring structure for attack by microorganisms, such as Streptomyces or Phanerochaete. In especially preferred embodiments, the aromatic ring has a first substituent R.sub.1 selected from among hydroxy, lower alkoxy, or amino, and a second substituent R.sub.2 selected from among lower alkyl, lower alkoxy and halogen. Some embodiments include a third ring substituent R.sub.3 selected from the group lower alkyl, lower alkoxy, and halogen.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 28 OF 32 USPATFULL on STN  
AN 94:93582 USPATFULL  
TI Switching device  
IN Eguchi, Ken, Atsugi, Japan  
Sakai, Kunihiro, Yamato, Japan  
Kawada, Haruki, Atsugi, Japan  
Matsuda, Hiroshi, Yokohama, Japan  
Morikawa, Yuko, Kawasaki, Japan  
Nakagiri, Takashi, Tokyo, Japan  
Hamamoto, Takashi, Yokohama, Japan  
Kuribayashi, Masaki, Inagi, Japan  
PA Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)  
PI US 5359204 19941025  
AI US 1992-964481 19921021 (7)

RLI Continuation of Ser. No. US 1991-662389, filed on 19 Feb 1991, now abandoned which is a continuation of Ser. No. US 1987-106271, filed on 9 Oct 1987, now abandoned

PRAI JP 1986-243684 19861013  
JP 1986-309431 19861224  
JP 1987-133157 19870527

DT Utility

FS Granted

EXNAM Primary Examiner: Crane, Sara W.

LREP Fitzpatrick, Cella Harper & Scinto

CLMN Number of Claims: 72

ECL Exemplary Claim: 1

DRWN 17 Drawing Figure(s); 8 Drawing Page(s)

LN.CNT 1233

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A switching device is characterized by having periodical layer structure of an organic insulator between a pair of electrodes and having memorizability with respect to switching characteristic. The layer structure is formed of an amphiphilic compound according to the LB method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 29 OF 32 USPATFULL on STN

AN 94:93387 USPATFULL

TI Second-order nonlinear optical polymer and method for producing the same

IN Amano, Michiyuki, Urizura, Japan

Hikita, Makoto, Mito, Japan

Tomaru, Satoru, Mito, Japan

Kaino, Toshikuni, Mito, Japan

Shuto, Yoshito, Hitachi, Japan

PA Nippon Telegraph and Telephone Corporation, Tokyo, Japan (non-U.S. corporation)

PI US 5359008 19941025

AI US 1993-62138 19930517 (8)

PRAI JP 1992-4149995 19920518

DT Utility

FS Granted

EXNAM Primary Examiner: Nagumo, Mark

LREP Finnegan, Henderson, Farabow, Garrett & Dunner

CLMN Number of Claims: 10

ECL Exemplary Claim: 1,3

DRWN No Drawings

LN.CNT 1027

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a second-order nonlinear optical polymer including a polymer backbone and side groups bonded to the polymer backbone, wherein the side groups include one or more of a first nonlinear optical group represented by the following formula (C-1) and one or more of a second nonlinear optical group represented by the following formula (C-2) or (C-2)': ##STR1## wherein  $\pi_{\text{sub.1}}$  to  $\pi_{\text{sub.n}}$ ,  $\pi'_{\text{sub.1}}$ ,  $\pi'_{\text{sub.2}}$ , and  $\pi''_{\text{sub.1}}$  each represent independently a  $\pi$ -conjugated cyclic compound group;  $X_{\text{sub.1}}$  to  $X_{\text{sub.n-1}}$ ,  $X'_{\text{sub.1}}$ ,  $Y_{\text{sub.1}}$  to  $Y_{\text{sub.n-1}}$ , and  $Y'_{\text{sub.1}}$  each represent independently CH, N, or N→O;  $A_{\text{sub.1}}$ ,  $A_{\text{sub.2}}$ , and  $A_{\text{sub.3}}$  each represent independently an electron attracting group;  $D_{\text{sub.1}}$ ,  $D_{\text{sub.2}}$ , and  $D_{\text{sub.3}}$  each represent independently an electron donating group; and n represents an integer of 3 or greater.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 30 OF 32 USPATFULL on STN  
AN 85:75213 USPATFULL  
TI Heat-developable light-sensitive materials with shifted dyes  
IN Naito, Hideki, Kanagawa, Japan  
Sato, Kozo, Kanagawa, Japan  
PA Fuji Photo Film Co. Ltd., Japan (non-U.S. corporation)  
PI US 4560644 19851224  
AI US 1984-594491 19840329 (6)  
DCD 20010925  
PRAI JP 1983-51656 19830329  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Schilling, Richard L.  
LREP Sughrue, Mion, Zinn, Macpeak and Seas  
CLMN Number of Claims: 16  
ECL Exemplary Claim: 13  
DRWN No Drawings  
LN.CNT 1183

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A heat-developable light-sensitive material comprising a support having there on a light-sensitive silver halide, a binder and a dye releasing compound which is capable of reducing the light-sensitive silver halide and reacting with the light-sensitive silver halide by heating to release a dye, said dye releasing compound is changed so as to have shorter absorption wavelength. The heat-developable light-sensitive material has high sensitivity and can be developed without supplying water from the outside.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 31 OF 32 USPATFULL on STN  
AN 78:62483 USPATFULL  
TI Color diffusion transfer photographic materials with sulfone color developing agent scavengers  
IN Sera, Hidefumi, Kanagawa, Japan  
Tsubota, Motohiko, Kanagawa, Japan  
Hanai, Sosuke, Kanagawa, Japan  
PA Fuji Photo Film Co., Ltd., Minami-ashigara, Japan (non-U.S. corporation)  
PI US 4124394 19781107  
AI US 1976-754802 19761227 (5)  
PRAI JP 1975-159256 19751229  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Schilling, Richard L.  
LREP Sughrue, Rothwell, Mion, Zinn and Macpeak  
CLMN Number of Claims: 15  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1765

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In a color diffusion transfer photographic material which comprises a photosensitive element containing at least one silver halide emulsion layer having associated therein a non-diffusible dye image-providing material, an image-receiving element for immobilizing therein diffusible dye formed by the oxidation reaction of the dye image-providing material and a primary aromatic amino color developing agent to form dye images, and a processing composition for developing the exposed silver halide in the silver halide emulsion layer and transferring the diffusible dye formed into the image-receiving layer with at least one of the photosensitive elements, the image-receiving element or the processing composition containing a primary aromatic amino color developing agent



or a precursor thereof, with the photosensitive element and/or the image-receiving element of the photographic material containing at least one of divinyl sulfone and a divinyl sulfone derivative represented by the formula (I): ##STR1## wherein B represents an atomic group necessary for forming an ammonium group, a sulfonium group or a phosphonium group; X.sup.- represents an acid anion; and n is 0, 1 or 2.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 32 OF 32 USPATFULL on STN  
AN 76:56891 USPATFULL  
TI Polymeric ammonium mordants for dye transfer  
IN Yoshida, Takashi, Minami-ashigara, Japan  
Miyazako, Takushi, Minami-ashigara, Japan  
PA Fuji Photo Film Co., Ltd., Minami-ashigara, Japan (non-U.S. corporation)  
PI US 3986875 19761019  
AI US 1974-499108 19740820 (5)  
PRAI JP 1973-93701 19730820  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Klein, David; Assistant Examiner: Schilling, Richard L.  
LREP Sughrue, Rothwell, Mion, Zinn and Macpeak  
CLMN Number of Claims: 28  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 1280

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An image-receiving element for use in a color diffusion transfer process which comprises a support having thereon an image-receiving layer containing a mordanting polymer having therein a repeating structural unit represented by the following General Formula (I); ##EQU1## wherein each of R.sub.1, R.sub.2, R.sub.3 and R.sub.4 is an alkyl group, a hydroxyalkyl group or an aralkyl group, and each of R.sub.1 and R.sub.3 and R.sub.2 and R.sub.4 can combine to form an alkylene group; A is an alkylene group, an arylene group or a group of the formula ##SPC1##

In which m and n each represents 0 or an integer of at least 1, with at least one of m and n being an integer of at least 1; and X.sup.- and Y.sup.- each represents a monovalent anion, and a method for forming a color image in the color diffusion transfer process comprising spreading an alkaline processing solution between an exposed silver halide photosensitive element and the image-receiving element above described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.